

Information and Communication Technologies (ICT) Application and Farmers' Perception: A Case Study

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ABSTRACT

Now a day, various means for information communication are available, satellite based internet communication found very efficient, accurate, quick and somewhat cheaper in the field of disseminating the information from research system to farmers. This communication has touched almost all the districts in our country and is mainly down up to the village levels. Internet communication offers a means for bridging the gap between developmental and research professional, rural people and agricultural producers through the initiation of interaction and dialogue. Keeping all the views and research objectives in mind it was decided to study the expectations and opinion of the farmers regarding internet facility through Community Internet Center (CIC). Majority of the respondents was expected the Community Internet Center (CIC) facilities at panchayat office of the village. The major purposes to have CIC explained by the respondents were to collect agricultural information, to know latest news and information about the world and to know about product prices. All of them expressed positive response to have proper training about the use of internet facility through Government appoint private agency with good farming experience. The results found that majority of the farmers understood that internet is a rich source to collect world wide information on agriculture and it is the fastest way to exchange information in shortest time. Majority farmers completely or to a certain degree felt that though internet is costly affair for the farmers but it is the best mean to collect information on market prices, support price, future price of agricultural products.

1. Introduction

The economy of our country depends on agriculture and allied agro based industries, animal husbandry and other agriculture related businesses. Agriculture is the major occupation and way of life for more than half of the total population. Thus, overall development of our country is depending on growth and development in the agriculture and farmers. Since major part of our population are being lived in different villages of the rural areas, quick dissemination of information related to technology and new development from the agriculture research system to the door step of the ultimate users and reporting their problems to research system are the essential inputs in transfer of agricultural technology (Buddhadev, B. V. (2003)). During last few decades, fast development in information and communication technologies has been seen but this development has not been able to reach large mass of the farmers who are spread across the whole country.

Farmers are thirstier and become anxious to get quick, exact and authentic information related to farming in the changing scenario of agriculture at global level. Dissemination of the required and recent farming related information to the farmers in scattered villages at the varied geographical situation in India is very difficult task. Transfer of technology to the farmers is not a onetime exercise because new farm technology is being constantly developed. A continuous flow of develop technologies and latest information to the farmers is an appropriate manner to provide quick benefit of this development to the farmers. There has been a technological explosion within the field of agriculture. This demands that the farmer must to know all aspects of technology prior to its adoption. It can only be

possible through the use of latest satellite based Internet technologies.

Due to development in Information and communication technologies, various means for information communication are available, satellite based internet communication found very efficient, accurate, quick and somewhat cheaper in the field of disseminating the information from research system to farmers hand. Internet communication has touched most of all the districts in our country and is mainly down up to the village levels. Internet offers a ways for bridging the gap between developmental professional, rural individuals and agricultural producers through the initiation of interaction and dialogue.

2. Literature Review

Chauhan, N. M. (2010) conducted a study under a title of farmers' perception about ICT application: a case study of Gujarat state. These studies cover Anand district of Gujarat state because the district is agriculturally one of the more advanced districts. Four villages Viz. Vasad, Mogar, Napad and Navli having more than 5000 population and comparatively sound infrastructure facilities were selected purposively. Total 100 farmers from four villages were covers under study. Keeping in view the objectives of the study, data were collected using structured interview schedule prepared for the purpose. Statistical tools such as frequency and percent and co-efficient of correlation were employed to analyze the data. Study found that most of the respondents was expected the Community Internet Center (CIC) facilities at panchayat office of the village. The information on farmers' related sites was expected by most of the farmers in local (Gujarati) language that too in the audio-visual form. The major

purposes to have CIC explained by the respondents were to collect agricultural information, government's programmes, and market prices. Majority of the respondents expressed their desire to use Internet daily or twice in a week by their own. All of them expressed positive response to have proper training about the use of Internet facility through government agency, at CIC. The results showed that majority of the farmers understood that internet is a rich source to collect world wide information on agriculture and it is the fastest way to exchange information in shortest time'. Majority farmers completely or to a certain degree felt that though internet is costly affair for the farmers but it is the best mean to collect information on market prices of agricultural products. It was concluded that education, land holding, contact with NRI's, experience of internet use and mass media exposure are significantly and positively correlated with the opinion of the farmers about the use of internet for farming community.

3. Objectives of the study

The present study has been undertaken with a view to know the expectations of the farmers regarding information and communication technologies (ICT) and Community Internet Centre (CIC) at village level and opinions of the farmers regarding internet facility was carried out in Mansa taluka of Gandhinagar district in Gujarat state.

4. Research Methodology

The number of satellite based internet connection in Indian has crossed the three million mark and the number of telephone connections is over four hundred million. Many pilot projects for connect rural community under cyber space are underway at various locations. The initial response of the rural people, particularly farmers has been exceptionally encouraging and many organizations are trying to establish internet connectivity to make best use to satellite based communication technology. This research cover six villages Viz. Ajol, Bilodra, Boru, Charada, Delvada and Itadara having more than 3500 population and comparatively sound infrastructure facilities and good farming were selected under study. Keeping in view the purposes of the study, data were collected using structured questionnaire. A list of progressive farmers was prepared with the help of village level worker and from others sources from all the selected villages. Total 180 questionnaires were distributed to the listed farmers in six selected villages. 30 questionnaires were distributed to the listed farmers in each village. Out of this all questionnaires 150 filled questionnaires were return. Out of 150 filled questionnaires, finally 120 complete filled questionnaires were covers for data analysis and discussion of result. Researchers used the MS excel tool for data analysis of collected data and according to this data pie chart and graph chart were used for interpretation for better understanding.

5. Results and Discussion

Respondents Profile:

It was observed that 56% of the farmers' were access internet facility from the middle age group, 39% farmers are getting high school and higher secondary level of education and 33% have living with joint family. 40% of the respondents belonged to the

small category of farmers. In order to earn additional income along with farming about 58.80% of them possessed two or more animals. Only 8% respondents were found to be the member in one or more organizations.

Expectation of the Farmers about CIC:

Table 1: The expectation of respondent about CIC at village level

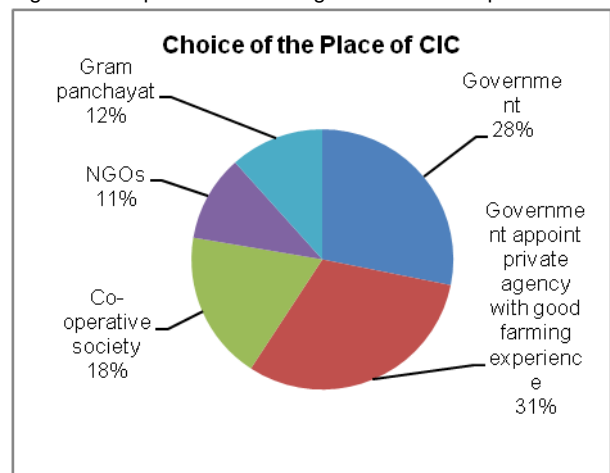
Farmers Expectation	Number	Percentage (%)
Yes	86	71.67
No	34	28.33
Total	120	100.00

The data presented in table 1 indicates that 71.67% of the farmers expected to have CIC at village level. It shows that farmers have realized importance of latest ICT and Internet facility in villages as an effective source of information as well as for the speedy communication.

Table 2: Respondent according to choice of the place of CIC

Place	Number	Percentage (%)
Panchayat	50	41.67
School	12	10.00
Any co-operative Place	09	07.50
Special space for CIC	40	33.33
Community hall	09	07.50
Total	120	100.00

Figure 1: Respondent according to choice of the place of CIC



It can be observed from the data in table 2 and figure 1 that place of Panchayat building for CIC was preferred by 41.67 per cent of the respondents, followed by Special space for CIC by 33.33%, building of school by 10.00% and any co-operative place and community hall by 07.50 per cent respectively. Panchayat building is such an informal place, where people feel much familiarity, thus it was preferred by great majority of the farmers for the place of CIC.

Table 3: The respondents according to expectation of services from CIC

Services	Number	Percentage (%)
Operator/Person to Guide and help	86	71.67

Printer	102	85
Sets of Computer with internet	98	81.67
Collected information in printed form	104	86.67
Collected information in digital form	89	74.17
News paper and others reading materials	116	96.67

In table 3 multiple choice given to respondents. The data in table 3 indicate that operator/person to guide and help, printer, sets of computer with internet, collected information in printed form, collected information in digital form, news paper and others reading materials were expected by 71.67, 85.00, 81.67, 86.67, 74.17 and 96.67 per cent of the farmers, respectively.

Table 4: Respondents according to choice of person to manage CIC

Person	Number	Percentage (%)
Agriculture graduate with good computer knowledge	95	79.17
Educated person of village with good computer and farming knowledge	100	83.33
Computer expert	86	71.67
School teacher	69	57.50

The data in table 4 indicate that majority 83.33% respondents prefer educated person of village with good computer and farming knowledge, 79.17% prefer agriculture graduate with good computer knowledge while only 57.50% respondents prefer teacher to manage the CIC. In this question respondents have given multiple answers for selection.

Table 5: Respondents according to their expectation for the provision of financial facility to start and to bear expenses to run CIC

Financial Sources	Rank	Number	Percentage (%)
Government	I	103	85.83
Co-operative societies	III	71	59.17
By villagers' sharing	V	59	49.17
Voluntary donation	IV	68	56.67
Foreign relatives / Foreign Donors	II	98	81.67

With a view to knowing farmers' choice and rank of sources to take initial financial support to start and to bear expenses to run CIC, information was collected and presented in table 5. The first choice of the farmers to take initial financial support to start CIC was government (85.83%) followed by foreign relatives /foreign donors (81.67%), co- operative societies (59.17%). Only

56.67% respondents ready for sharing in CIC. Respondents have been given multiple choices for giving this question answer.

Table 6: Respondents purposes about the CIC

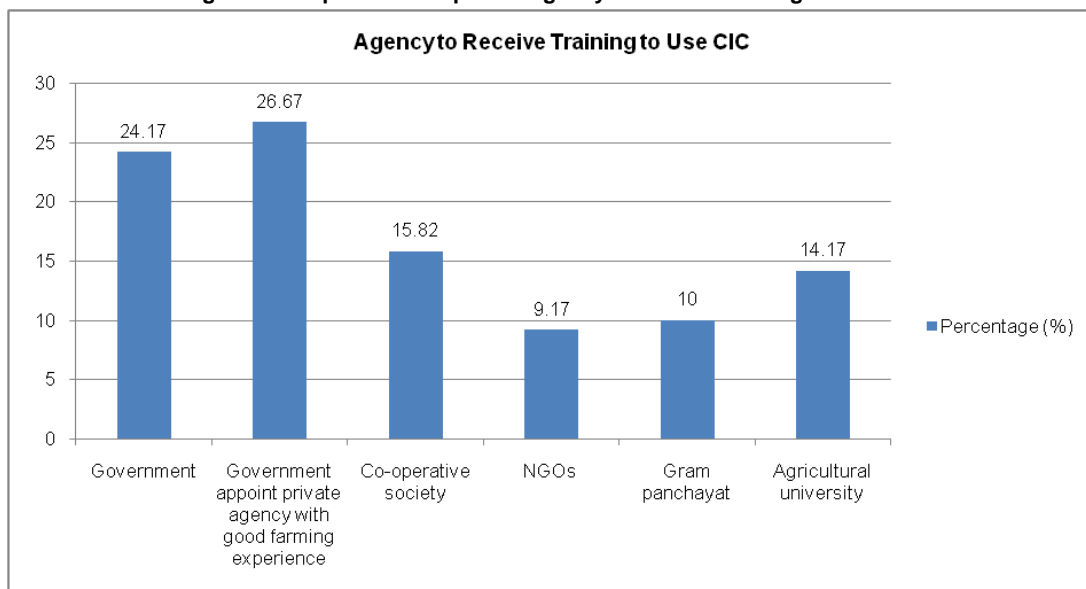
Purposes	Number	Percentage (%)
To collect agricultural information	103	85.83
To collect information on government's Programmes	83	69.17
For speedy communication	76	63.33
For exchange information	92	76.67
For entertainment	70	58.33
To collect information for their children's education	79	65.83
To contact foreign relatives	48	40.00
To contact relatives in India	63	52.50
To know latest development and research in farming	73	60.83
To know more about support price, market prices	93	77.50
To know latest news and information about the world	95	79.17

The data presented in table 6 reveals that the major uses of internet expected by the respondents were to collect agricultural information (85.83%), to know latest news and information about the world (79.17%), to know more about support price, market prices (77.50%), for exchange information (76.67%), to collect information on government's programmes (69.17%). Only 40.00% respondents' purpose of use of internet is to contact with foreign relatives. The farmers are ready to use Internet for agricultural information but on majority of the agricultural sites, information is available in English language. All state government should launch farmers' related sites in local languages. Now a day, many State Governments have initiated their efforts in this direction.

Table 7: Respondents expected agency to receive training to use CIC

Agency	Number	Percentage (%)
Government	29	24.17
Government appoint private agency with good farming experience	32	26.67
Co-operative society	19	15.82
NGOs	11	09.17
Gram panchayat	12	10.00
Agricultural university	17	14.17
Total	120	100.00

Figure 2: Respondents expected agency to receive training to use CIC



The data presented in table 7 and figure 2 indicate that 26.67 % of the respondents expected training through government appoints private agency with good farming experience, followed by 24.17 % expected training by

government, 15.82 % respondents by co-operative society. Only 11.00 % of them expected such training by NGOs. This means farmers have confidence in private agencies for training.

Table 8: Opinion of the respondents about use of internet facility

Statements	Opinions					
	Fully Agree		Partially Agree		Disagree	
	No's	%	No's	%	No's	%
Internet can be a very useful mean to the farmers during present time	69	57.5	37	30.8	14	11.7
Internet is rich source to collect worldwide information on agriculture and allied fields	76	63.3	32	26.7	12	10
Internet is fastest way to exchange information in shortest time	80	66.7	30	25	10	8.33
Internet is best mean to collect information on (market/support/future) prizes of agricultural products	42	35	53	44.2	25	20.8
Information available in local language on internet is easy to understand	63	52.5	48	40	9	7.5
Development of Indian farmers is possible through internet	49	40.8	61	50.8	10	8.33
I wish that my children should make positive use of internet facility	63	52.5	45	37.5	12	10
Internet is costly affair for the farmers so internet is available free of cost for the farmers	65	54.2	42	35	13	10.8

The data show in table 8 indicated that 90.00 % of the farmers understood that internet is a rich source to collect world wide information on agriculture and its allied fields, while 66.67 % fully agree with the statement that 'internet is fastest way to exchange information in shortest time'. Looking to the present cost involved in this technology, it is not easy for the farmers to have this facility individually at his home, thus, 89.17 % per cent of the farmers completely or partially agree with internet is available free of cost for the farmers. Internet is best mean to collect information on (market/support/future) prizes of agricultural products but mix opinion was observed for this aspect and it was observed that 35.00 % of the farmers full fully agree with statement and 20.83% farmers are not agree with statement.

The results point out that majority (88.33 %) of the respondents agreed with the statement that "Internet can be a very useful mean to the farmers during present time. Farmers are not in position to use this information available in English language for the agriculture development so 92.50 % farmers agree with that information available in local language on internet is easy to understand. It was really pleasing to note that majority (91.67 %) of the farmers out of them 40.83% totally and 50.84% partly assumed that development of Indian farmers is possible through Internet. Internet is best mean to learn all new things for young generation, thus, 90.00% of the farmers were wishing their children to make positive use of internet.

6. Conclusion

71.67% of the respondents have expected the Community Internet Centre (CIC) facilities at village level. Slightly 41.67 % of them preferred Panchayat office as the best place of CIC and they were expecting educated person of village with good computer and farming knowledge as operator or guide at CIC. The respondents expressed that government support financial facility to start and to bear expenses to run CIC. The information on farmers' related sites was expected by most of the farmers in Gujarati language. The major purposes to have CIC explained by the respondents were to collect

agricultural information, to collect information on government's programmes, to speed up communication, to exchange information, and to know more about products prices. Majority of the respondents expressed positive response to have proper training about the use of Internet facility through government appoint private agency with good farming experience at CIC for sustainable agricultural development. It can be concluded from the all above results that majority of respondents have interested to establish CIC at local level with proper preplanning and after running and it must be use by the farming community for their betterment.

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